

# AGRICULTURAL AND BIOLOGICAL ENGINEERING DEPARTMENT

*Chair:* D. Z. Haman

*Graduate Coordinator:* G. Kiker

The degrees of Master of Science, Master of Engineering and Doctor of Philosophy are offered with graduate programs in agricultural and biological engineering through the College of Engineering. Requirements for these degrees are given in the Graduate Degrees (<http://gradcatalog.ufl.edu/graduate/degrees/>) section of this catalog.

A combination B.S./M.S. program allows up to 12 graduate credits to be double-counted toward fulfillment of both degrees. Contact the graduate coordinator for qualifications and details.

The Master of Science, Master of Engineering, and Doctor of Philosophy degrees are offered in the following areas of research:

**Agricultural production engineering** includes development and application of precision agriculture concepts and tools, weather and climate risk in agriculture, decision support systems, food security, pesticide application, post-harvest operations, robotics and other machine systems and environmental control systems. Applications to space biology are included in cooperation with NASA at Kennedy Space Center.

**Biological engineering** includes biocomplexity analysis, ecological modeling, risk and decision analysis, bioprocess design, plant biotechnology, process microbiology, food process engineering, environmental biotechnology, bioreactors, and packaging science.

**Information systems** includes development and application of GIS and remote sensing, communications, mathematical modeling, data solutions and expert systems techniques to biological and agricultural systems.

**Land and water resources** includes soil-water-plant relations, irrigation, water quality, watershed hydrology, BMP and TMDL studies, hydrologic modeling, ecological restoration, environmental fate and transport of nanoparticles, waste management, and water reuse.

Students also may choose to participate in interdisciplinary concentrations in hydrologic sciences, geographic information sciences, particle science and technology, and interdisciplinary ecology.

For more information about the program, please visit the program link below and the graduate studies pages on the departmental website at <http://www.abe.ufl.edu>.

## Majors

- Agricultural and Biological Engineering (Engineering) (<http://gradcatalog.ufl.edu/graduate/colleges-departments/engineering/agricultural-biological/agricultural-biological/>)

## Faculty

### Professor

- Burks, Thomas Francis
- Dukes, Michael D.

- Fraisse, Clyde William
- Gao, Bin
- Graham, Wendy Dimbero
- Hoogenboom, Gerrit
- Huffaker, Ray G.
- Jones, Pierce H.
- Judge, Jasmeet
- Kiker, Gregory A.
- Lee, Won Suk
- Migliaccio, Kati White
- Mukhtar, Saqib
- Munoz-Carpena, Rafael
- Shukla, Sanjay
- Welt, Bruce Ari

### Associate Professor

- Bliznyuk, Nikolay A.
- Correll, Melanie J.
- Martinez, Christopher J.
- Medeiros, Henry Ponti
- Muneeppeerakul, Rachata
- Pullammanappallil, P C.
- Tong, Zhaohui

### Assistant Professor

- Ampatzidis, Ioannis
- Bayabil, Haimanote Kebede
- Bean, Eban Zachary
- Boz Ozdemir, Ziyinet
- Choi, Daeun
- Gorucu, Serap
- Guzman Gutierrez, Sandra Milena
- Her, Young Gu
- Hofstetter, Daniel William
- Martin-Ryals, Ana D.
- Sharma, Vivek
- Singh, Aditya
- Wang, Xu
- Watson, Jonathan A.
- Yu, Ziwen
- Zhang, Ying

### Research Professor

- Palm, Cheryl A.

### Senior Lecturer

- Porter, Wendell A.

### Affiliated Faculty

- De Vries, Albert  
Professor
- Menezes, Amor  
Assistant Professor

- Schueller, John Kenneth  
Professor